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FOREST STATISTICS FOR SOUTHEAST GEORGIA, 1952

by

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FOREWORD

Through the McSweeney-McNary Act of 1928, Congress authorized the Secretary of Agriculture to conduct a comprehensive survey of the forest resources of the United States. The Forest Survey was organized by the Forest Service to carry out the provisions of the Act through the Regional Forest Experiment Stations. In the Southeastern states the Forest Survey is an activity of the Division of Forest Economics of the Southeastern Forest Experiment Station, Asheville, North Carolina.

The five-fold purpose of the Forest Survey is (1) to make a field inventory of the present supply of standing timber, (2) to ascertain the rate at which this supply is being increased through growth, (3) to determine the rate at which it is being reduced through industrial and domestic uses, fire, and other causes, (4) to determine the present consumption and the probable future trend in requirements for forest products, and (5) to interpret and correlate these finds to aid in the formulation of private and public policies regarding forest land management.

The forest resources of the State of Georgia were first inventoried by the Forest Survey during the period 1934-36, and these findings have been published. Since that time, the effects of timber cutting, forest growth, changes in land use, better management practices, and other factors have caused changes in the growing stock which can only be measured accurately by on-the-ground surveys. A resurvey of the forest resources in Georgia was started in July 1950. This progress report presents area and timber volume statistics compiled from the resurvey for Southeast Georgia, designated as Survey Unit No. 1.

ACKNOWLEDGMENTS

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The Division of Forest Economics is under the direction of James W. Bruckhart. The field inventory work was under the supervision of Mackay B. Brown and L. F. Nix. Photo interpretation work was done by R. C. Aldrich. Office compilation of the data was under the direction of Miss Agnes Cressman, assisted by Miss Louise Shuford and Miss Camilla Young.

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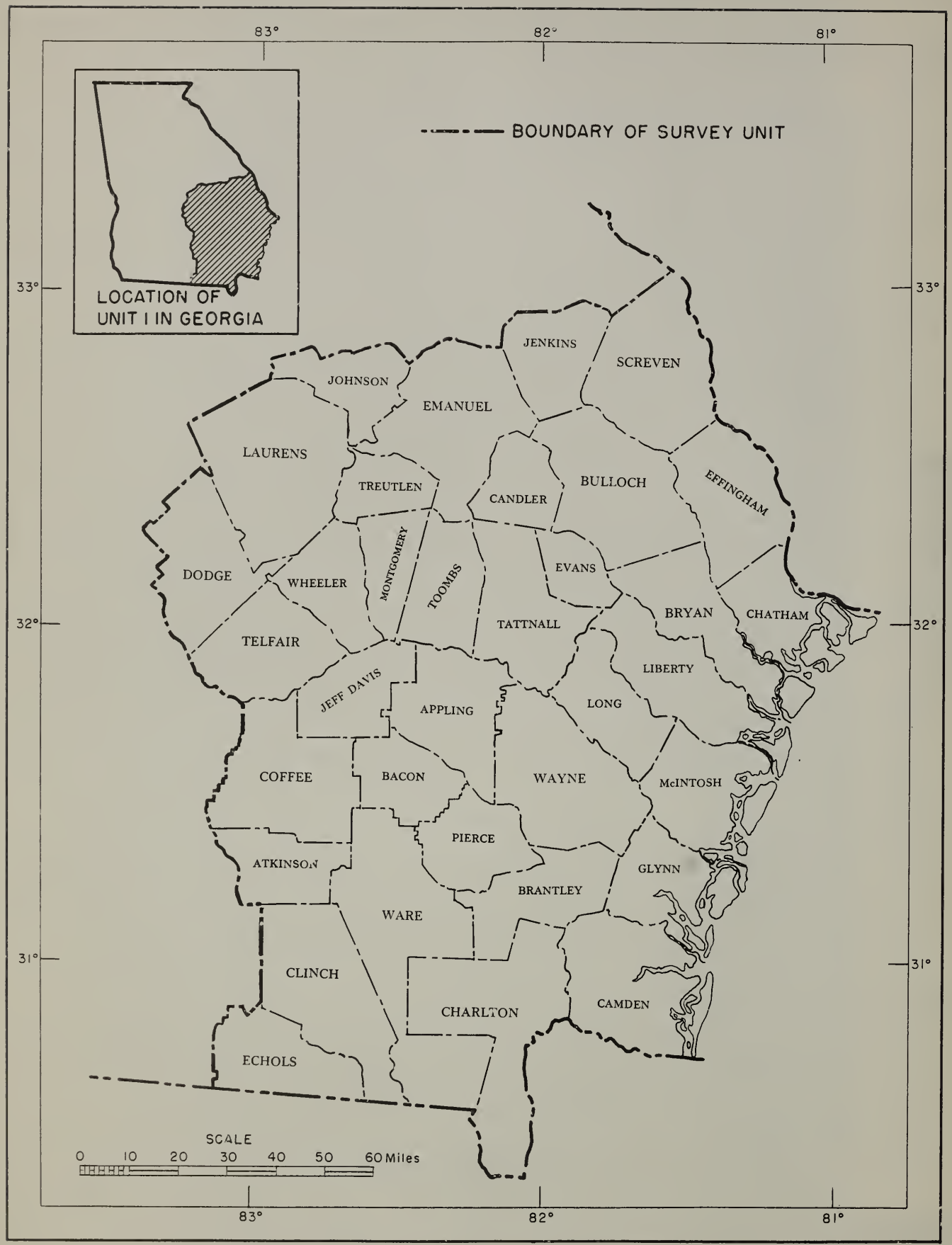


Figure 1.--Counties in Southeast Georgia included in Survey Unit No. 1

FOREST STATISTICS FOR SOUTHEAST GEORGIA, 1952

This progress report presents statistical data on forest area and timber volumes for 35 counties in Southeast Georgia designated as Survey Unit No. 1 (fig. 1). The field data were obtained during the period March 1951 to March 1952 as part of a resurvey of forest resources in Georgia which was started in July 1950 and is still continuing. The procedures used in obtaining the estimates of land area and timber volumes are outlined briefly on page 38.

The original Forest Survey of Southeast Georgia was made in 1934. Statistics for both surveys have been compared to show changes and trends which have occurred during the 17-year interim.

1952 HIGHLIGHTS AND SIGNIFICANT CHANGES

Nearly three-fourths of the land area is forested.--The thirty-five counties which make up the Southeast Georgia Survey Unit contain an aggregate area of 10.6 million acres. Forests occupy 7.7 million acres, or 72 percent, of this total land area (fig. 2). This unit, with its high proportion of forest land, is the most important timber-producing section in the State. Land in agricultural use amounts to 1.9 million acres, with 300 thousand additional acres classified as idle. The remaining 7 percent of land area includes cities and towns, rights-of-way, marsh, and coastal beaches.

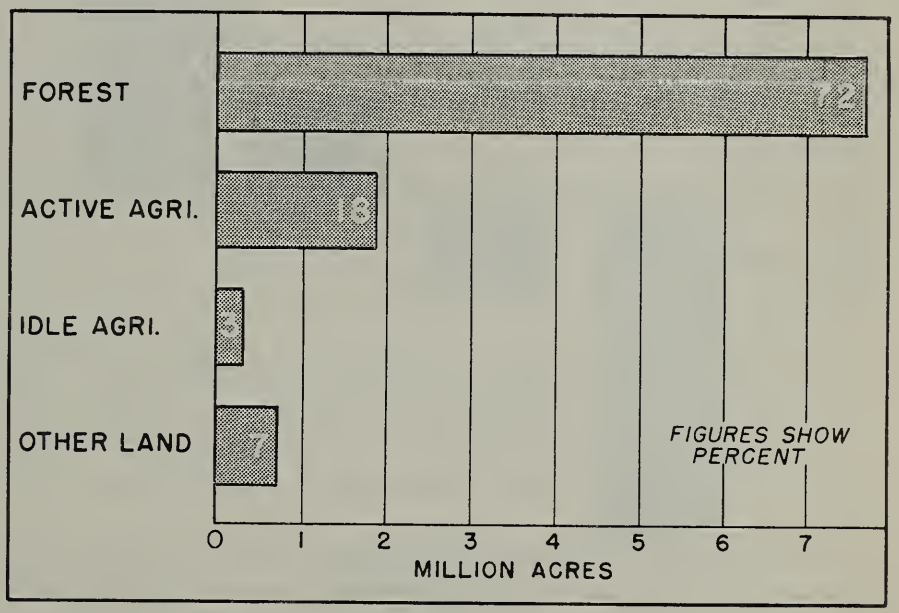


Figure 2.--Land use in Southeast Georgia, 1952

In the 17-year period between the 1934 and 1952 surveys, the area of forest land increased 234 thousand acres, or 3.1 percent. This increase is largely due to the reversion of idle and abandoned agricultural land to forest.

Ninety-two percent of the forest land is privately owned. Nearly half of the private forest land is in farm woodlands or forests, and the remainder is owned by pulp and paper mills, lumber companies, estates, and other private owners. The publicly-owned forest land is primarily in Federal ownership with the bulk of the acreage in Camp Stewart and the Okefenokee National Wildlife Refuge.

Hardwood forest types increase in area at expense of pine.--Acreage comparisons based on forest type definitions used in the original Survey show that 770 thousand acres or 10 percent of the forest land which was formerly classified as pine type has now been taken over by hardwoods. The heaviest loss was in the area of longleaf-slash pine types, which decreased nearly 600 thousand acres (fig. 3).

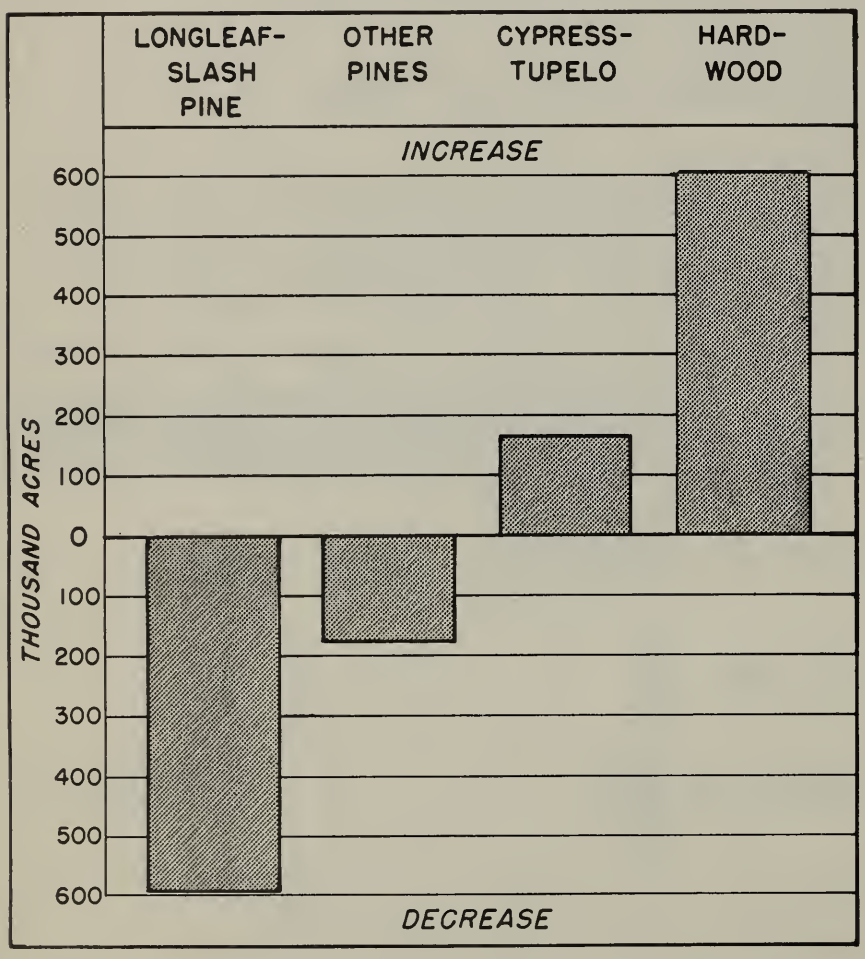


Figure 3.--Change in area of forest types, 1934-1952

These shifts in the composition of the forests are primarily the result of cutting practices used in harvesting timber. When stands of pine are mixed with hardwoods or cypress, or where there is a hardwood understory, the preferred pine timber is often cut leaving the less desirable species to occupy the site. Similar trends are found in other survey units in Southeastern States, and they may be expected to continue until hardwood control measures or changes in cutting practices can be economically applied on large areas.

Under current definitions which divide the forest into types on the basis of cubic volume or number of stems, pine types occupy 5.0 million acres, or 65 percent of the forest land. Hardwood types, including hardwood-pine mixtures, occupy 2.3 million acres, or 31 percent, and the cypress type occupies the remaining 4 percent.

Better stocking of young pine timber.--The numbers of sound trees found in both surveys have been compared by species group and size class to show the changes which have occurred in the timber stands. The most important change is the increase in number of sound pine trees in all diameters through the 14-inch class. Changes in numbers of trees for the cypress and hardwood species groups are spotty and indicate net reductions in trees of saw-timber size. These changes are shown in Table A.

Table A.--Percent change in numbers of sound trees by species group and diameter class, 1934 to 1952

D.b.h. class (inches)	Pine	Cypress	Soft-textured hardwoods	Hard-textured hardwoods	All species
2	+74	+20	+69	+101	+69
4	+96	-12	+17	+ 25	+51
6	+70	+ 9	- 3	+ 49	+40
8	+30	+16	- 8	+ 23	+19
10	+61	0	+16	- 21	+39
12	+42	+ 1	-10	- 11	+21
14	+11	- 2	+ 5	+ 18	+ 9
16	-11	-34	-19	+ 3	-14
18	-27	+ 2	-25	- 10	-22
20+	-51	-31	-51	- 15	-40
All diameters	+68	+10	+44	+ 69	+54
All trees 6" and larger	+46	+ 6	- 4	+ 19	+27
All saw-timber trees	+37	- 4	-13	- 3	+21

The increase in numbers of small pine trees, together with the decrease in area of pine types, indicates a better stocking of trees in present pine-timber stands. This is apparently the effect of more intensive fire protection, better management and cutting practices, more planting, and conservative turpentining practices in recent years.

The total increase in trees of all sizes and species amounts to 54 percent. Considering only the trees of volume size (6 inches and larger in diameter), the most significant increases were in pine and hard-textured hardwood species. In contrast, it should be noted that there were heavy decreases in the larger, better-quality trees primarily suitable for saw timber. The number of pine trees 15 inches or larger in diameter is 23 percent less. The numbers of cypress and hardwood trees of this size are also off about one-fourth. This reduction in the numbers of trees in larger, more desirable sizes means that the lumber

industry must manufacture more of its product from smaller, lower-quality trees. It also means heavier competition between segments of the wood-using industries for trees in the same range of size classes.

Another change which deserves serious consideration is the increase in young sapling-size hardwood trees. There are now three hardwood saplings ranging in size from 1.0 to 2.9 inches in diameter for each two pine saplings of the same size, and the hardwoods are increasing at a faster rate. The proportion of cull trees in timber stands has also increased sharply since 1934.

Pine saw-timber volume increases 21 percent.--The volume of pine saw timber increased from 8.0 billion board feet in 1934 to 9.6 billion in 1952, a change of 21 percent. Hardwood and cypress timber exhibited a counter trend, decreasing in volume from 6.5 billion board feet to 5.1 billion. The resulting change is a 2-percent net increase in the total saw-timber volume as shown in table B.

Table B.--Change in volume of saw timber, 1934 to 1952

Species group	1934 1/	1952	Change
	Million bd. ft.	Million bd. ft.	Percent
Pines	7,994	9,641	+21
Hardwoods	5,132	3,953	-23
Cypress	1,364	1,171	-14
All species	14,490	14,765	+ 2

1/ Original survey volumes have been recomputed to allow for differences in standards between surveys and to adjust for the Okefenokee Swamp and coastal areas which were not surveyed in 1934. These changes in the 1934 estimates have been made to provide a uniform basis for comparison.

Softwoods make up 73 percent of the total board-foot volume, with pine timber accounting for nearly nine-tenths of the softwood volume. Slash pine is the most important species, followed in order by longleaf, loblolly, and pond pine. One-fourth of the saw-timber volume is in stands classified as large saw timber, and nearly 50 percent is in small saw-timber stands. Both classes have a minimum volume of 1,500 board feet per acre. Most of the remaining saw timber is scattered throughout stands of poles and young trees. The size of the average pine saw-timber tree is relatively small, being 11.9 inches in diameter at breast height.

Hardwood sawlog quality poor, softwood better.--Hardwood Log Grades for Standard Lumber, as developed by the Forest Products Laboratory, were used in grading hardwood sawlogs in the 1952 survey. Under these rules, only 14 percent of the board-foot volume qualified as select or grade 1, and 23 percent as grade 2. The remaining 63 percent was classified as grade 3, which is composed of low-grade factory lumber logs or logs suitable primarily for the manufacture of cross ties and timbers. This means that about three-fifths of the lumber produced from these logs would be in grades poorer than No. 1 common.

Softwood saw-timber trees graded under modified Crossett Log Grades are of somewhat better quality. Twenty-eight percent is in grade 1 logs, 46 percent is in grade 2, and only 26 percent is in grade 3. Sawn for lumber, these logs would yield approximately 15 percent of the total volume in B and Better grades.

Growing stock volume increases 8 percent.--The total growing stock volume includes all sound trees of pole-timber size (5.0 to 8.9 inches d.b.h. for softwoods and 5.0 to 10.9 inches for hardwoods) as well as the larger saw-timber trees. Trees smaller than 5.0 inches in size are considered saplings or seedlings and are not assigned volumes for inventory purposes.

Changes in terms of cubic volume for all sound trees 5.0 inches d.b.h. and larger roughly parallel those of board-foot volume. The total increase since 1934 was 8 percent, but pine volume increased 25 percent while hardwood and cypress volumes decreased 15 and 8 percent respectively.

Table C.--Change in volume of all trees 5.0 inches d.b.h. and larger, 1934 to 1952

Species group	Growing stock			Cull trees		
	1934 1/	1952	Change	1934 1/	1952	Change
	Million cu. ft.	Million cu. ft.	Percent	Million cu. ft.	Million cu. ft.	Percent
Pines	2,537	3,181	+25	20	159	+695
Hardwoods 2/	1,586	1,350	-15	458	817	+ 78
Cypress	381	351	- 8	93	78	- 16
All species	4,504	4,882	+ 8	571	1,054	+ 85

1/ See footnote 1, table B.

2/ Excludes limb volume of hardwood saw-timber trees.

Volume of cull material increases.--Table C also shows that the volume of trees classified as culls because of poor form or rotten defect has risen sharply. Although the volume of cull pine timber increased nearly seven times, the most significant increase was in cull hardwood trees. During the period, scrub oak volume increased from 22 million to 37 million cubic feet and the volume of rotten cull hardwoods doubled. Cull trees are seldom cut and tend to increase in number in the stands unless special silvicultural measures are taken to remove them. These trees pose a difficult utilization problem and at the same time occupy growing space which could be used to grow better-quality timber.

Planting required to reforest many areas.--Two and one-quarter million acres of forest land in the pine and upland hardwood types are now less than 40 percent stocked with sound trees of commercial species. About four-fifths of this acreage has a suitable source of seed and the areas may be expected to restock naturally. It will be necessary, however, to plan nearly one-half million acres to bring them back into production within a reasonable length of time. Also, some of the area reported as idle agricultural land is better suited to forest use and should be included in any planting program. About 200 thousand acres of the forest land is suitable for the operation of tractor-drawn planting machines and the remainder would require hand planting.

Other areas are overstocked.--More than 40 percent of the forest land area is in a fully-stocked or overstocked condition when all trees including the seedling and sapling sizes are considered. As these stands continue to grow, natural mortality may be expected to reduce the stocking on most areas. However, some stands will require a silvicultural treatment to prevent stagnation and provide for a reasonable rate of growth.

Gum naval stores activity widespread.--Throughout Southeast Georgia working turpentine crops are found on 36 percent of the area in slash and longleaf timber stands. More than 58 million trees, most of them in the ten-, twelve-, and fourteen-inch diameter classes, are now in the working and resting stages.

Since 1934, however, gum naval stores activity has declined. The area of working crops decreased from three million to 1.2 million acres, and the number of trees being worked is down to 38 million as compared to 51 million.

Table 1.--Gross area[1/] by broad use class, 1952

Class of use	Area	
	Thousand acres	Percent
Forest land:		
Commercial	7,626.8	70.4
Noncommercial:		
Reserved from commercial use	0.6	(2/)
Unproductive for timber use	49.8	0.5
Total forest	7,677.2	70.9
Nonforest land:		
Agriculture - active	1,691.6	15.6
Agriculture - idle	329.2	3.0
Pasture	191.0	1.8
Marsh	438.3	4.0
Urban and other[3/]	272.0	2.5
Total nonforest	2,922.1	26.9
Total land area	10,599.3	97.8
Total water area[4/]	233.3	2.2
All classes	10,832.6	100.0

1/ From U. S. Bureau of the Census, 1950.

2/ Less than 0.05 percent.

3/ Includes urban, suburban residential, and rural industrial areas, rights-of-way, cemeteries, schools, etc.

4/ Includes 81,000 acres of water according to Survey standards of area classification but defined by the Bureau of Census as land.

Table 2.--Ownership of land, 1952

Class of ownership	All land		Commercial forest land	
	Thousand acres	Percent	Thousand acres	Percent
Public land:				
National forest	--	--	--	--
Indian	--	--	--	--
Other federal	626.0	5.9	539.2	7.1
Total federal	626.0	5.9	539.2	7.1
State	55.2	0.5	46.6	0.6
County and municipal	21.7	0.2	8.6	0.1
Total public	702.9	6.6	594.4	7.8
Private land:				
Farm	(1/)	--	3,215.9	42.2
Other	(1/)	--	3,816.5	50.0
Total private	9,896.4	93.4	7,032.4	92.2
All classes	10,599.3	100.0	7,626.8	100.0

1/ Data not available.

Table 3.--Commercial forest area by forest type and stand-size class, 1952

(In thousand acres)

Forest type[1/]	Large saw-timber stands	Small saw-timber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Pine types:						
Longleaf pine	17.6	393.0	644.0	410.0	160.8	1,625.4
Slash pine	75.3	957.2	763.1	815.1	85.3	2,696.0
Loblolly pine	67.1	109.2	121.2	103.4	13.0	413.9
Shortleaf pine	--	--	3.3	--	--	3.3
Pond pine	13.8	28.3	55.3	112.3	38.1	247.8
Total	173.8	1,487.7	1,586.9	1,440.8	297.2	4,986.4
Other types:						
Oak-pine	63.8	95.9	109.3	160.2	37.7	466.9
Oak-hickory:						
Upland hdwds.	2.8	12.2	33.8	62.5	15.0	126.3
Scrub oak	--	--	--	35.9	198.6	234.5
Oak-gum-cypress:						
Lowland hdwds.	331.4	239.0	420.2	494.1	36.8	1,521.5
Cypress	32.4	76.4	70.2	104.2	8.0	291.2
Total	430.4	423.5	633.5	856.9	296.1	2,640.4
All types	604.2	1,911.2	2,220.4	2,297.7	593.3	7,626.8
Percent	7.9	25.1	29.1	30.1	7.8	100.0

1/ See description of forest types and stand-size classes in appendix.

Table 4.--Net volume[1/] of saw timber by species and stand-size class, 1952

(In million board feet)

Species[2/]	Large saw-timber stands	Small saw-timber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Softwoods:						
Longleaf pine	79.3	1,195.8	632.4	259.9	70.8	2,238.2
Slash pine	525.4	3,567.5	872.9	480.6	41.0	5,487.4
Loblolly pine	600.3	621.1	189.6	110.3	7.4	1,528.7
Pond pine	57.6	123.9	84.3	81.5	22.2	369.5
Shortleaf pine	--	5.4	5.4	6.3	--	17.1
Total pine	1,262.6	5,513.7	1,784.6	938.6	141.4	9,640.9
Cypress	455.9	478.5	143.5	84.9	2.7	1,165.5
Cedar	1.3	1.0	0.9	0.7	1.6	5.5
Total sftwds.	1,719.8	5,993.2	1,929.0	1,024.2	145.7	10,811.9
Hardwoods:						
Bl. & tupelo gum	438.9	567.0	187.7	99.8	1.5	1,294.9
Sweetgum	373.7	131.5	66.6	46.0	--	617.8
Yellow-poplar	100.4	69.5	23.1	3.2	--	196.2
Soft maple	45.6	58.8	44.6	3.8	--	152.8
Other soft hdwds.	157.5	69.6	30.5	20.6	--	278.2
Total	1,116.1	896.4	352.5	173.4	1.5	2,539.9
White & swamp chestnut oaks	30.4	17.2	8.7	2.4	--	58.7
Other white oaks	54.3	30.1	28.9	18.8	8.3	140.4
No. red & swamp red oaks	5.4	11.7	3.4	2.9	--	23.4
Other red oaks	507.3	179.4	118.1	51.9	--	856.7
Hickory	73.1	18.3	15.1	5.9	3.4	115.8
Ash	60.2	16.3	15.6	--	--	92.1
Other hard hdwds.	87.9	17.7	14.9	5.2	--	125.7
Total	818.6	290.7	204.7	87.1	11.7	1,412.8
Total hdwds.	1,934.7	1,187.1	557.2	260.5	13.2	3,952.7
All species	3,654.5	7,180.3	2,486.2	1,284.7	158.9	14,764.6
Percent	24.8	48.6	16.8	8.7	1.1	100.0

1/ Log scale, International 1/4-inch rule.

2/ See appendix for species combined with others.

Table 5.--Net volume[1/] of saw timber by species and diameter class, 1952

Species	10-12 inches[2/]	14-18 inches	20-24 inches	26+ inches	All diameters	
	Million bd. ft.	Million bd. ft.	Million bd. ft.	Million bd. ft.	Million bd. ft.	Percent
Softwoods:						
Longleaf pine	1,662.4	558.1	17.7	--	2,238.2	15.2
Slash pine	3,594.0	1,727.2	156.1	10.1	5,487.4	37.2
Loblolly pine	513.5	743.5	238.0	33.7	1,528.7	10.3
Pond pine	173.2	177.4	18.9	--	369.5	2.5
Shortleaf pine	7.7	9.4	--	--	17.1	0.1
Total pine	5,950.8	3,215.6	430.7	43.8	9,640.9	65.3
Cypress	504.2	395.2	211.3	54.8	1,165.5	7.9
Cedar	4.4	1.1	--	--	5.5	(3/)
Total sftwds.	6,459.4	3,611.9	642.0	98.6	10,811.9	73.2
Hardwoods:						
Bl. & tupelo gum	384.4	734.5	149.0	27.0	1,294.9	8.8
Sweetgum	86.1	341.4	148.1	42.2	617.8	4.2
Yellow-poplar	25.4	127.4	43.4	--	196.2	1.3
Soft maple	47.1	93.9	11.8	--	152.8	1.0
Other soft hdwds.	66.0	173.3	38.9	--	278.2	1.9
Total	609.0	1,470.5	391.2	69.2	2,539.9	17.2
White & swamp chestnut oak	8.5	35.4	14.8	--	58.7	0.4
Other white oaks	18.0	51.7	35.7	35.0	140.4	1.0
No. red & swamp red oaks	4.5	14.5	4.4	--	23.4	0.2
Other red oaks	115.8	355.4	238.3	147.2	856.7	5.8
Hickory	14.0	54.4	15.9	31.5	115.8	0.8
Ash	8.8	78.9	4.4	--	92.1	0.6
Other hard hdwds.	13.8	47.6	23.8	40.5	125.7	0.8
Total	183.4	637.9	337.3	254.2	1,412.8	9.6
Total hdwds.	792.4	2,108.4	728.5	323.4	3,952.7	26.8
All species	7,251.8	5,720.3	1,370.5	422.0	14,764.6	100.0
Percent	49.1	38.7	9.3	2.9	100.0	

1/ Log scale, International 1/4-inch rule.

2/ Ten-inch hardwoods are not included.

3/ Less than 0.05 percent.

Table 6.--Net volume[1/] of saw timber by forest type and stand-size class, 1952

(In million board feet)

Forest type[2/]	Large saw-timber stands	Small saw-timber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Pine types:						
Longleaf pine	55.6	1,115.7	571.6	161.3	55.1	1,959.3
Slash pine	476.5	3,828.9	833.6	422.2	37.3	5,598.5
Loblolly pine	472.0	526.2	107.3	45.2	5.8	1,156.5
Shortleaf pine	--	--	7.3	--	--	7.3
Pond pine	42.5	69.6	80.4	33.1	18.9	244.5
Total	1,046.6	5,540.4	1,600.2	661.8	117.1	8,966.1
Other types:						
Oak-pine	321.1	349.9	154.7	115.3	10.7	951.7
Oak-hickory:						
Upland hdwds.	8.1	47.7	27.4	33.5	3.0	119.7
Scrub oak	--	--	--	5.6	19.4	25.0
Oak-gum-cypress:						
Lowland hdwds.	2,001.5	950.7	598.4	418.3	6.5	3,975.4
Cypress	277.2	291.6	105.5	50.2	2.2	726.7
Total	2,607.9	1,639.9	886.0	622.9	41.8	5,798.5
All types	3,654.5	7,180.3	2,486.2	1,284.7	158.9	14,764.6
Percent	24.8	48.6	16.8	8.7	1.1	100.0

1/ Log scale, International 1/4-inch log rule.

2/ See description of forest types and stand-size classes in appendix.

Table 7.--Net volume[1/] of all timber by species and stand-size class, 1952

(In thousand cords)

GROWING STOCK

Species	Large saw-timber stands	Small saw-timber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Softwoods:						
Longleaf pine	240	4,789	3,931	1,289	315	10,564
Slash pine	1,725	15,395	7,153	2,075	137	26,485
Loblolly pine	1,550	2,066	1,268	447	20	5,351
Pond pine	153	487	463	364	71	1,538
Shortleaf pine	--	15	15	16	--	46
Total pine	3,668	22,752	12,830	4,191	543	43,984
Cypress	1,115	1,878	818	431	8	4,250
Cedar	4	3	3	2	5	17
Total sftwds.	4,787	24,633	13,651	4,624	556	48,251
Hardwoods:						
Bl. & tupelo gum	1,699	3,432	2,132	562	11	7,836
Sweetgum	1,131	531	602	145	--	2,409
Yellow-poplar	298	239	91	61	--	689
Soft maple	273	319	352	77	--	1,021
Other soft hdwds.	538	379	217	60	--	1,194
Total	3,939	4,900	3,394	905	11	13,149
White & swamp chestnut oak	75	49	36	34	--	194
Other white oaks	138	116	123	66	21	464
No. red & swamp red oaks	13	37	31	10	--	91
Other red oaks	1,434	665	864	198	4	3,165
Hickory	210	79	55	14	8	366
Ash	180	113	119	--	--	412
Dogwood, persimmon	61	5	20	5	4	95
Other hard hdwds.	250	122	72	22	--	466
Total	2,361	1,186	1,320	349	37	5,253
Total hdwds.	6,300	6,086	4,714	1,254	48	18,402
All species	11,087	30,719	18,365	5,878	604	66,653
Percent	16.6	46.1	27.6	8.8	0.9	100.0

OTHER MATERIAL

Sound culls						
Softwoods	126	714	663	545	163	2,211
Hardwoods[2/]	1,566	1,671	1,723	1,149	566	6,675
Rotten culls	1,418	1,243	1,453	887	117	5,118
Hardwood limbs	1,376	945	614	310	35	3,280
Total other material	4,486	4,573	4,453	2,891	881	17,284

1/ Sound wood and bark.

2/ Includes noncommercial species.

Table 8.--Net volume[1/] of all timber by species and diameter class, 1952

(In thousand cords)

GROWING STOCK

Species	Pole trees		Saw-timber trees				All diameters
	6 inches	8 inches	10 inches	12 inches	14-18 inches	20+ inches	
Softwoods:							
Longleaf pine	1,220	2,436	2,836	2,387	1,636	49	10,564
Slash pine	3,434	5,641	6,276	5,579	5,136	419	26,485
Loblolly pine	491	876	665	850	1,863	606	5,351
Pond pine	205	279	272	266	471	45	1,538
Shortleaf pine	--	--	16	8	22	--	46
Total pine	5,350	9,232	10,065	9,090	9,128	1,119	43,984
Cypress	401	783	731	776	989	570	4,250
Cedar	--	--	7	7	3	--	17
Total sftwds.	5,751	10,015	10,803	9,873	10,120	1,689	48,251
Hardwoods:							
Bl. & tupelo gum	986	1,362	1,875	1,175	2,000	438	7,836
Sweetgum	190	280	377	238	874	450	2,409
Yellow-poplar	46	74	70	67	327	105	689
Soft maple	159	221	210	147	255	29	1,021
Other soft hdwds.	136	191	151	180	442	94	1,194
Total	1,517	2,128	2,683	1,807	3,898	1,116	13,149
White & swamp chestnut oak	13	15	17	26	89	34	194
Other white oaks	63	44	14	51	129	163	464
No. red & swamp red oaks	7	2	24	12	36	10	91
Other red oaks	325	387	325	325	905	898	3,165
Hickory	7	50	19	40	139	111	366
Ash	60	53	60	25	203	11	412
Dogwood, persimmon	52	30	--	5	8	--	95
Other hard hdwds.	36	68	58	34	119	151	466
Total	563	649	517	518	1,628	1,378	5,253
Total hdwds.	2,080	2,777	3,200	2,325	5,526	2,494	18,402
All species	7,831	12,792	14,003	12,198	15,646	4,183	66,653
Percent	11.7	19.2	21.0	18.3	23.5	6.3	100.0

OTHER MATERIAL

Sound culls							
Softwoods	131	229	573	492	695	91	2,211
Hardwoods[2/]	925	1,272	1,326	924	1,628	600	6,675
Rotten culls	374	528	566	482	1,511	1,657	5,118
Hardwood limbs	--	--	--	665	1,714	901	3,280
Total other material	1,430	2,029	2,465	2,563	5,548	3,249	17,284

1/ Sound wood and bark.

2/ Includes noncommercial species.

Table 9.--Net volume[1/] of all timber by species and class of material, 1952

(In thousand cords)

Species	GROWING STOCK				OTHER MATERIAL	
	Saw-timber trees		Pole-timber trees	Total sound trees	Sound culls[2/]	Rotten culls
	Sawlog portion	Upper stems				
Softwoods:						
Longleaf pine	5,579	1,329	3,656	10,564	623	22
Slash pine	14,048	3,362	9,075	26,485	751	72
Loblolly pine	3,213	771	1,367	5,351	324	38
Pond pine	856	198	484	1,538	207	66
Shortleaf pine	37	9	--	46	20	--
Total pine	23,733	5,669	14,582	43,984	1,925	198
Cypress	2,403	663	1,184	4,250	269	602
Cedar	12	5	--	17	17	3
Total sftwds.	26,148	6,337	15,766	48,251	2,211	803
Hardwoods:						
Bl. & tupelo gum	2,887	726	4,223	7,836	3,150	1,974
Sweetgum	1,238	324	847	2,409	573	436
Yellow-poplar	398	101	190	689	134	66
Soft maple	345	86	590	1,021	978	512
Other soft hdwds.	576	140	478	1,194	719	409
Total	5,444	1,377	6,328	13,149	5,554	3,397
White & swamp chestnut oak	116	33	45	194	44	24
Other white oaks	274	69	121	464	549	146
No. red & swamp red oaks	46	12	33	91	43	4
Other red oaks	1,687	441	1,037	3,165	1,579	1,049
Hickory	226	64	76	366	214	39
Ash	185	54	173	412	160	134
Dogwood, persimmon	11	2	82	95	14	13
Scrub oak[3/]	--	--	--	--	1,021	--
Other hard hdwds.	238	66	162	466	198	88
Total	2,783	741	1,729	5,253	3,822	1,497
Total hdwds.	8,227	2,118	8,057	18,402	9,376	4,894
All species	34,375	8,455	23,823	66,653	11,587	5,697
Percent	51.6	12.7	35.7	100.0	67.0	33.0

1/ Sound wood and bark.

2/ Includes limb volume of hardwood saw-timber trees.

3/ Includes noncommercial species.

Table 10.--Net volume[1/] of all timber by forest type and stand-size class, 1952

(In thousand cords)

GROWING STOCK

Forest type	Large saw-timber stands	Small saw-timber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Pine types:						
Longleaf pine	161	4,521	3,851	852	223	9,608
Slash pine	1,618	17,111	7,079	1,984	119	27,911
Loblolly pine	1,315	1,889	1,047	177	15	4,443
Shortleaf pine	--	--	20	--	--	20
Pond pine	115	214	407	209	61	1,006
Total	3,209	23,735	12,404	3,222	418	42,988
Other types:						
Oak-pine	1,068	1,501	899	504	37	4,009
Oak-hickory:						
Upland hdwds.	28	164	240	130	17	579
Scrub oak	--	--	--	23	95	118
Oak-gum-cypress:						
Lowland hdwds.	6,132	4,089	4,089	1,792	31	16,133
Cypress	650	1,230	733	207	6	2,826
Total	7,878	6,984	5,961	2,656	186	23,665
All types	11,087	30,719	18,365	5,878	604	66,653
Percent	16.6	46.1	27.6	8.8	0.9	100.0

OTHER MATERIAL

Pine types:						
Longleaf pine	4	188	304	209	57	762
Slash pine	149	1,253	471	383	27	2,283
Loblolly pine	269	192	162	187	62	872
Shortleaf pine	--	--	11	--	--	11
Pond pine	13	33	30	76	27	179
Total	435	1,666	978	855	173	4,107
Other types:						
Oak-pine	343	551	417	139	82	1,532
Oak-hickory:						
Upland hdwds.	34	74	85	95	63	351
Scrub oak	--	--	--	58	342	400
Oak-gum-cypress:						
Lowland hdwds.	3,570	2,092	2,771	1,610	208	10,251
Cypress	104	190	202	134	13	643
Total	4,051	2,907	3,475	2,036	708	13,177
All types	4,486	4,573	4,453	2,891	881	17,284
Percent	25.9	26.5	25.8	16.7	5.1	100.0

1/ Sound wood and bark.

Table 11.--Net volume[1/] of pole-timber trees by forest type and stand-size class, 1952

(In thousand cords)

GROWING STOCK

Forest type	Large saw-timber stands	Small saw-timber stands	Pole-timber stands	Seedling & sapling stands	Poorly stocked stands & unstocked areas	All stands
Pine types:						
Longleaf pine	--	1,087	2,080	350	45	3,562
Slash pine	224	4,910	4,445	666	4	10,249
Loblolly pine	149	444	742	53	--	1,388
Shortleaf pine	--	--	--	--	--	--
Pond pine	9	9	176	103	5	302
Total	382	6,450	7,443	1,172	54	15,501
Other types:						
Oak-pine	243	520	458	182	7	1,410
Oak-hickory:						
Upland hdwds.	8	38	168	37	8	259
Scrub oak	--	--	--	7	37	44
Oak-gum-cypress:						
Lowland hdwds.	1,086	1,503	2,477	644	13	5,723
Cypress	18	396	415	57	--	886
Total	1,355	2,457	3,518	927	65	8,322
All types	1,737	8,907	10,961	2,099	119	23,823
Percent	7.3	37.4	46.0	8.8	0.5	100.0

OTHER MATERIAL

Pine types:						
Longleaf pine	--	42	71	72	24	209
Slash pine	75	423	171	141	--	810
Loblolly pine	75	42	46	36	--	199
Shortleaf pine	--	--	--	--	--	--
Pond pine	10	10	20	35	--	75
Total	160	517	308	284	24	1,293
Other types:						
Oak-pine	77	178	168	42	56	521
Oak-hickory:						
Upland hdwds.	6	10	33	16	31	96
Scrub oak	--	--	--	27	241	268
Oak-gum-cypress:						
Lowland hdwds.	702	500	933	582	102	2,819
Cypress	40	50	166	41	--	297
Total	825	738	1,300	708	430	4,001
All types	985	1,255	1,608	992	454	5,294
Percent	18.6	23.7	30.4	18.7	8.6	100.0

1/ Sound wood and bark.

Table 12.--Net volume[1/] of all timber by species and diameter class, 1952

(In million cubic feet)

GROWING STOCK

Species	Pole trees		Saw-timber trees				All diameters
	6 inches	8 inches	10 inches	12 inches	14-18 inches	20+ inches	
Softwoods:							
Longleaf pine	71.6	163.9	206.8	181.6	129.8	4.1	757.8
Slash pine	202.8	377.8	456.2	421.1	409.6	35.7	1,903.2
Loblolly pine	28.8	58.9	48.7	64.7	150.4	51.8	403.3
Pond pine	12.1	18.8	19.3	20.5	38.0	3.9	112.6
Shortleaf pine	--	--	1.1	0.6	1.9	--	3.6
Total pine	315.3	619.4	732.1	688.5	729.7	95.5	3,180.5
Cypress	26.9	59.0	57.9	65.3	87.0	53.8	349.9
Cedar	--	--	0.5	0.5	0.3	--	1.3
Total sftwds.	342.2	678.4	790.5	754.3	817.0	149.3	3,531.7
Hardwoods:							
Bl. & tupelo gum	59.4	89.6	131.0	88.7	158.4	36.2	563.3
Sweetgum	11.4	18.4	26.1	17.8	69.3	37.0	180.0
Yellow-poplar	2.9	4.8	4.9	5.2	25.9	8.5	52.2
Soft maple	9.4	14.5	14.8	11.0	20.0	2.4	72.1
Other soft hdwds.	8.3	12.6	10.5	13.7	35.3	7.6	88.0
Total	91.4	139.9	187.3	136.4	308.9	91.7	955.6
White & swamp chestnut oak	0.8	0.9	1.2	1.8	7.2	2.9	14.8
Other white oaks	3.7	2.9	1.0	3.9	10.5	13.5	35.5
No. red & swamp red oaks	0.4	0.1	1.7	1.0	2.8	0.8	6.8
Other red oaks	19.4	25.5	22.4	24.8	72.1	74.0	238.2
Hickory	0.4	3.4	1.3	3.0	11.0	9.1	28.2
Ash	3.5	3.6	4.2	1.8	16.1	0.8	30.0
Dogwood, persimmon	3.1	2.0	--	0.4	0.6	--	6.1
Other hard hdwds.	2.1	4.6	4.0	2.5	9.1	12.4	34.7
Total	33.4	43.0	35.8	39.2	129.4	113.5	394.3
Total hdwds.	124.8	182.9	223.1	175.6	438.3	205.2	1,349.9
All species	467.0	861.3	1,013.6	929.9	1,255.3	354.5	4,881.6
Percent	9.6	17.6	20.8	19.0	25.7	7.3	100.0

OTHER MATERIAL

Sound culls							
Softwoods	8.1	16.1	41.1	38.4	56.0	7.7	167.4
Hardwoods[2/]	58.9	84.8	92.5	70.9	129.9	49.2	486.2
Rotten culls	22.9	35.2	40.1	39.1	122.9	140.4	400.6
Hardwood limbs	--	--	--	41.6	107.5	64.3	213.4
Total other material	89.9	136.1	173.7	190.0	416.3	261.6	1,267.6

1/ Excluding bark.

2/ Includes noncommercial species.

Table 13.--Net volume[1] of all timber by species and class of material, 1952

(In million cubic feet)

Species	GROWING STOCK				OTHER MATERIAL	
	Saw-timber trees		Pole-timber trees	Total sound trees	Sound culls[2]	Rotten culls
	Sawlog portion	Upper stems				
Softwoods:						
Longleaf pine	425.3	97.0	235.5	757.8	47.5	1.7
Slash pine	1,077.6	245.0	580.6	1,903.2	56.0	4.9
Loblolly pine	253.7	61.9	87.7	403.3	24.6	2.9
Pond pine	67.1	14.6	30.9	112.6	15.3	5.1
Shortleaf pine	2.9	0.7	--	3.6	1.5	--
Total pine	1,826.6	419.2	934.7	3,180.5	144.9	14.6
Cypress	214.1	49.9	85.9	349.9	21.2	55.1
Cedar	1.1	0.2	--	1.3	1.3	0.3
Total sftwds.	2,041.8	469.3	1,020.6	3,531.7	167.4	70.0
Hardwoods:						
Bl. & tupelo gum	229.9	53.4	280.0	563.3	228.2	149.8
Sweetgum	99.6	24.5	55.9	180.0	30.2	31.6
Yellow-poplar	31.8	7.8	12.6	52.2	6.0	5.1
Soft maple	27.2	6.2	38.7	72.1	67.4	37.0
Other soft hdwds.	45.6	11.0	31.4	88.0	46.3	29.8
Total	434.1	102.9	418.6	955.6	378.1	253.3
White & swamp chestnut oak	9.5	2.4	2.9	14.8	3.4	1.7
Other white oaks	22.1	5.8	7.6	35.5	41.3	11.3
No. red & swamp red oaks	3.7	0.9	2.2	6.8	3.3	0.4
Other red oaks	136.2	34.7	67.3	238.2	122.1	84.1
Hickory	18.4	4.7	5.1	28.2	15.8	2.9
Ash	15.0	3.7	11.3	30.0	8.9	9.6
Dogwood, persimmon	0.8	0.2	5.1	6.1	1.0	0.9
Scrub oak[3]	--	--	--	--	74.1	--
Other hard hdwds.	19.2	4.8	10.7	34.7	11.3	6.7
Total	224.9	57.2	112.2	394.3	281.2	117.6
Total hdwds.	659.0	160.1	530.8	1,349.9	659.3	370.9
All species	2,700.8	629.4	1,551.4	4,881.6	826.7	440.9
Percent	55.3	12.9	31.8	100.0	65.2	34.8

1/ Excluding bark.

2/ Includes limb volume of hardwood saw-timber trees.

3/ Includes noncommercial species.

Table 14.--Average volume[1] per acre of saw timber by forest type, species group, and stand-size class, 1952

(In board feet)

Forest type and species group	Large saw-timber stands	Small saw-timber stands	Pole-timber stands	Other stand sizes	All stands
Longleaf pine					
Softwood	3,155	2,809	887	376	1,197
Hardwood	--	30	1	3	9
Slash pine					
Softwood	5,867	3,905	1,062	494	2,016
Hardwood	463	96	31	17	61
Loblolly pine[2]					
Softwood	6,377	4,496	854	376	2,563
Hardwood	655	322	67	63	227
Pond pine					
Softwood	2,838	2,319	1,453	340	954
Hardwood	244	142	--	6	33
Oak-pine					
Softwood	3,516	2,016	1,013	567	1,372
Hardwood	1,519	1,633	402	70	666
Upland hdwds.					
Softwood	--	412	212	201	220
Hardwood	2,891	3,514	599	269	728
Scrub oak					
Softwood	--	--	--	67	67
Hardwood	--	--	--	40	40
Lowland hdwds.					
Softwood	780	524	333	415	489
Hardwood	5,259	3,454	1,091	385	2,124
Cypress					
Softwood	8,428	3,554	1,470	466	2,403
Hardwood	138	261	34	--	92
All types					
Softwood	2,846	3,136	869	405	1,418
Hardwood	3,202	621	251	95	518

1/ Log scale, International 1/4-inch rule.

2/ Includes shortleaf pine type.

Table 15.--Average volume[1] per acre of all trees by forest type, species group, and stand-size class, 1952

(In standard cords)

Forest type and species group	Large saw-timber stands		Small saw-timber stands		Pole-timber stands		Other stand sizes		All stands	
	Sound[2]	Cull[2]	Sound	Cull	Sound	Cull	Sound	Cull	Sound	Cull
Longleaf pine										
Softwood	9.1	0.2	11.4	0.4	6.0	0.4	1.9	0.3	5.9	0.3
Hardwood	--	--	0.1	0.1	(3)	0.1	(3)	0.2	(3)	0.1
Slash pine										
Softwood	19.7	0.4	16.9	0.5	9.0	0.4	2.2	0.3	9.8	0.4
Hardwood	1.8	1.6	1.0	0.8	0.3	0.2	0.1	0.2	0.5	0.4
Loblolly pine										
Softwood	16.6	1.1	15.0	0.5	7.6	0.6	1.5	0.9	9.3	0.7
Hardwood	2.9	2.9	2.3	1.2	1.0	0.7	0.2	1.3	1.4	1.4
Shortleaf pine										
Softwood	--	--	--	--	6.1	3.4	--	--	6.1	3.4
Hardwood	--	--	--	--	--	--	--	--	--	--
Pond pine										
Softwood	7.5	--	7.0	1.0	7.2	0.5	1.7	0.4	3.9	0.5
Hardwood	0.9	0.9	0.5	0.2	0.1	(3)	0.1	0.2	0.2	0.2
Oak-pine										
Softwood	10.0	0.1	6.8	0.3	4.0	0.1	2.3	0.3	4.7	0.2
Hardwood	6.8	5.3	8.8	5.4	4.2	3.7	0.4	0.9	3.9	3.1
Upland hardwoods										
Softwood	--	--	1.2	--	1.2	0.1	0.7	0.1	0.8	0.1
Hardwood	9.9	12.1	12.3	6.1	6.0	2.4	1.2	1.9	3.8	2.7
Scrub oak										
Softwood	--	--	--	--	--	--	0.4	0.1	0.4	0.1
Hardwood	--	--	--	--	--	--	0.1	1.6	0.1	1.6
Lowland hardwoods										
Softwood	2.0	0.3	1.6	0.3	1.2	0.1	1.7	0.4	1.6	0.3
Hardwood	16.5	10.5	15.5	8.4	8.5	6.5	1.7	3.0	9.0	6.4
Cypress										
Softwood	19.6	1.7	14.3	1.4	8.7	0.5	1.9	1.1	8.7	1.1
Hardwood	0.5	1.5	1.8	1.1	1.8	2.4	(3)	0.2	1.0	1.1
All types										
Softwood	7.9	0.5	12.9	0.5	6.1	0.4	1.8	0.3	6.3	0.4
Hardwood	10.4	7.0	3.2	1.9	2.1	1.6	0.5	1.0	2.4	1.9

1/ Sound wood and bark.

2/ Sound trees; cull trees.

3/ Less than 0.05 cords per acre.

Table 16.--Number[1] of turpentine pine trees by working status and tree size, 1952

(In thousands of trees)

Working status	Pole-size trees	Small saw-timber trees	Large saw-timber trees	All trees
Round timber	223,659	59,783	1,803	285,245
Working timber				
Front-faced	1,230	18,442	245	19,917
Back-faced	506	15,601	1,903	18,010
Resting timber	1,305	17,274	1,745	20,324
Worked-out timber	518	9,379	1,065	10,962
All classes	227,218	120,479	6,761	354,458

1/ Includes sound cull trees.

Table 17.--Area[1] of turpentine pine types by working status, 1952

Crop working status	Area	
	Thousand acres	Percent
Round timber	885.1	19.3
Working timber		
Front-faced	587.9	12.8
Back-faced	635.7	13.9
Resting timber	426.8	9.3
Worked-out timber	138.5	3.0
No status[2]	1,913.4	41.7
All classes	4,587.4	100.0

1/ Includes 266 thousand acres of hardwood-longleaf pine and hardwood-slash pine mixtures.

2/ Areas having less than 15 longleaf or slash pine trees 9.0 inches d.b.h. or larger per acre.

Table 18.--Area of stump land and tonnage of wood naval stores stumps by availability class, 1952

Availability class	Area	No. stumps	Tonnage[1/]
	Thousand acres	Thousand stumps	Thousand tons
Merchantable area	3,879.1	62,581	9,763
Marginal area[2/]	89.6	977	152
Potential area[3/]	1,248.1	22,926	3,576
Inaccessible area	283.7	5,032	785
All classes	5,500.5	91,516	14,276

1/ Includes 207 thousand tons of stumps on agricultural land.

2/ Stump-land areas less than 25 acres in extent and partially worked areas.

3/ Areas unworkable at present due to density of timber stands.

Table 19.--Number of trees[1/] by species group, quality class, and tree size, 1952

(In thousands of trees)

Species group and quality class	Sapling-size trees	Pole-size trees	Small saw-timber trees	Large saw-timber trees	All trees
Yellow pines:					
Sound trees	852,751	255,046	128,540	9,899	1,246,236
Sound culls	27,951	6,224	8,578	890	43,643
Rotten culls	4,683	2,138	505	156	7,482
Total	885,385	263,408	137,623	10,945	1,297,361
Other softwoods:					
Sound trees	131,569	26,982	12,551	1,760	172,862
Sound culls	5,142	2,798	1,094	46	9,080
Rotten culls	1,713	1,220	1,015	746	4,694
Total	138,424	31,000	14,660	2,552	186,636
Soft-textured hdwds.:					
Sound trees	773,872	104,014	18,754	6,838	903,478
Sound culls	176,548	41,720	6,855	1,796	226,919
Rotten culls	43,308	30,396	5,642	3,855	83,201
Total	993,728	176,130	31,251	12,489	1,213,598
Hard-textured hdwds.:					
Sound trees	231,688	31,535	5,523	4,034	272,780
Sound culls[2/]	359,559	42,409	3,907	1,761	407,636
Rotten culls	25,039	7,625	2,234	2,184	37,082
Total	616,286	81,569	11,664	7,979	717,498
All species	2,633,823	552,107	195,198	33,965	3,415,093

1/ All trees 1.0 inch d.b.h. and larger.

2/ Includes scrub oak and noncommercial trees.

Table 20.--Area[1/] of seedling, sapling, and poorly stocked stands by plantability class, 1952

Forest type	No planting required[2/]	Suitable for machine planting	Hand planting required	All classes
	Thousand acres	Thousand acres	Thousand acres	Thousand acres
Longleaf pine	462.8	60.2	47.8	570.8
Slash pine	803.0	51.5	45.9	900.4
Loblolly pine	106.4	0.6	9.4	116.4
Pond pine	134.3	11.0	5.1	150.4
Oak-pine	167.8	7.4	22.7	197.9
Upland hdwds.	65.8	0.9	10.8	77.5
Scrub oak	31.5	66.6	136.4	234.5
All types	1,771.6	198.2	278.1	2,247.9
Percent	78.8	8.8	12.4	100.0

1/ Acreage of oak-gum-cypress types excluded.

2/ Sufficient seed trees present or area is restocking naturally.

Table 21.--Stocking on commercial forest area by forest type and tree size class, 1952

GROWING STOCK OF ALL SIZES

Forest type	Non-stocked 0-9%	Poor stocking 10-39%	Medium stocking 40-69%	Good stocking 70-99%	Over-stocked 100+%	Total area
	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Thousand acres
Longleaf pine	126.8	715.2	446.7	179.9	156.8	1,625.4
Slash pine	60.6	522.5	483.3	342.4	1,287.2	2,696.0
Loblolly pine	11.0	47.6	73.2	54.4	227.7	413.9
Shortleaf pine	--	--	3.3	--	--	3.3
Pond pine	24.5	81.3	67.4	25.4	49.2	247.8
Oak-pine	32.6	58.9	57.8	26.1	291.5	466.9
Upland hdwds.	12.0	18.5	9.9	14.0	71.9	126.3
Scrub oak	198.7	25.2	7.4	3.2	--	234.5
Lowland hdwds.	34.1	141.8	184.3	201.1	960.2	1,521.5
Cypress	4.0	40.9	25.8	18.1	202.4	291.2
All types	504.3	1,651.9	1,359.1	864.6	3,246.9	7,626.8
Percent	6.6	21.7	17.8	11.3	42.6	100.0

GROWING STOCK 5.0 INCHES DBH AND LARGER

Longleaf pine	485.9	807.1	260.8	67.6	4.0	1,625.4
Slash pine	692.9	1,081.2	533.1	239.0	149.8	2,696.0
Loblolly pine	89.1	197.5	66.8	38.5	22.0	413.9
Shortleaf pine	--	3.3	--	--	--	3.3
Pond pine	136.0	98.8	13.0	--	--	247.8
Oak-pine	153.7	197.4	67.3	38.9	9.6	466.9
Upland hdwds.	69.5	35.8	21.0	--	--	126.3
Scrub oak	234.5	--	--	--	--	234.5
Lowland hdwds.	374.8	535.5	367.4	142.1	101.7	1,521.5
Cypress	83.0	102.7	44.7	27.3	33.5	291.2
All types	2,319.4	3,059.3	1,374.1	553.4	320.6	7,626.8
Percent	30.4	40.1	18.0	7.3	4.2	100.0

SAW-TIMBER GROWING STOCK

Longleaf pine	797.2	716.2	98.3	13.7	--	1,625.4
Slash pine	1,209.8	1,037.7	327.3	97.2	24.0	2,696.0
Loblolly pine	180.2	152.6	58.5	13.4	9.2	413.9
Shortleaf pine	3.3	--	--	--	--	3.3
Pond pine	165.2	80.5	2.1	--	--	247.8
Oak-pine	235.2	179.3	43.5	8.9	--	466.9
Upland hdwds.	91.4	28.1	6.8	--	--	126.3
Scrub oak	234.5	--	--	--	--	234.5
Lowland hdwds.	603.3	652.3	190.5	44.4	31.0	1,521.5
Cypress	109.2	124.3	40.9	10.0	6.8	291.2
All types	3,629.3	2,971.0	767.9	187.6	71.0	7,626.8
Percent	47.6	38.9	10.1	2.5	0.9	100.0

Table 22.--County area by broad use class, 1952

County	Total area[1]/	Non-forest area		Forest land		
		Land	Water	Non-commercial	Commercial	
	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Percent
Appling	329.6	75.2	1.0	--	253.4	77.1
Atkinson	203.5	35.1	0.8	--	167.6	82.7
Bacon	187.5	57.0	--	--	130.5	69.6
Brantley	286.1	24.1	--	--	262.0	91.6
Bryan	291.2	43.4	11.6	35.2	201.0	71.9
Bulloch	438.4	198.2	2.4	--	237.8	54.5
Camden	444.8	103.6	31.7	--	309.5	74.9
Candler	160.6	61.5	0.6	--	98.5	61.6
Charlton	511.4	35.4	6.9	4.0	465.1	92.2
Chatham	321.3	148.3	46.9	0.4	125.7	45.8
Clinch	510.1	20.3	0.7	--	489.1	96.0
Coffee	392.3	142.2	0.4	--	249.7	63.7
Dodge	320.0	140.3	4.4	--	175.3	55.5
Echols	272.0	17.0	0.3	--	254.7	93.7
Effingham	307.2	53.2	1.2	--	252.8	82.6
Emanuel	439.1	154.9	0.9	--	283.3	64.7
Evans	119.0	41.4	0.5	--	77.1	65.1
Glynn	297.6	89.5	32.6	0.1	175.4	66.2
Jeff Davis	211.8	40.0	1.1	--	170.7	81.0
Jenkins	224.6	122.5	0.4	0.1	101.6	45.3
Johnson	200.3	101.3	0.8	--	98.2	49.2
Laurens	519.1	243.9	1.6	--	273.6	52.9
Liberty	343.0	70.5	25.1	--	247.4	77.8
Long	257.9	15.4	1.3	2.9	238.3	92.9
McIntosh	306.6	90.6	41.8	2.6	171.6	64.8
Montgomery	151.7	54.3	2.3	--	95.1	63.7
Pierce	218.9	59.8	0.9	--	158.2	72.6
Screven	416.6	177.6	2.9	--	236.1	57.1
Tattnall	315.5	93.1	1.3	--	221.1	70.4
Telfair	281.6	91.2	0.3	--	190.1	67.6
Toombs	236.2	91.0	1.2	--	144.0	61.3
Treutlen	124.2	43.1	0.2	--	80.9	65.2
Ware	583.7	73.5	5.3	5.1	499.8	86.4
Wayne	413.4	50.6	2.0	--	360.8	87.7
Wheeler	195.8	63.1	1.9	--	130.8	67.5
Unit total	10,832.6	2,922.1	233.3	50.4	7,626.8	72.0

1/ Gross area from Bureau of the Census, 1950.

Table 23.--Ownership of commercial forest land by county, 1952

County	Private		Public					
			National forest	Other federal	State	County, city, town	Total public	
	Thousand acres	Percent	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Thousand acres	Percent
Appling	252.4	99.6	--	--	0.9	0.1	1.0	0.4
Atkinson	167.6	100.0	--	--	--	--	--	--
Bacon	130.5	100.0	--	--	--	--	--	--
Brantley	257.0	98.1	--	--	5.0	--	5.0	1.9
Bryan	129.0	64.2	--	72.0	(1/)	--	72.0	35.8
Bulloch	237.4	99.8	--	--	0.1	0.3	0.4	0.2
Camden	309.0	99.8	--	--	0.5	--	0.5	0.2
Candler	98.5	100.0	--	--	--	(1/)	(1/)	--
Charlton	322.2	69.3	--	142.0	--	0.9	142.9	30.7
Chatham	121.7	96.8	--	2.4	0.1	1.5	4.0	3.2
Clinch	474.1	96.9	--	14.9	--	0.1	15.0	3.1
Coffee	249.6	100.0	--	--	0.1	(1/)	0.1	(2/)
Dodge	175.3	100.0	--	--	--	--	--	--
Echols	254.7	100.0	--	--	--	--	--	--
Effingham	252.7	100.0	--	--	--	0.1	0.1	(2/)
Emanuel	283.1	99.9	--	--	--	0.2	0.2	0.1
Evans	62.3	80.8	--	14.8	--	(1/)	14.8	19.2
Glynn	170.0	96.9	--	2.5	2.8	0.1	5.4	3.1
Jeff Davis	170.7	100.0	--	--	--	--	--	--
Jenkins	100.8	99.2	--	(1/)	0.8	--	0.8	0.8
Johnson	98.2	100.0	--	--	--	(1/)	(1/)	--
Laurens	273.4	99.9	--	(1/)	--	0.2	0.2	0.1
Liberty	139.1	56.2	--	108.3	--	(1/)	108.3	43.8
Long	215.3	90.3	--	23.0	--	--	23.0	9.7
McIntosh	168.4	98.1	--	2.9	--	0.3	3.2	1.9
Montgomery	95.1	100.0	--	--	--	--	--	--
Pierce	158.1	99.9	--	--	--	0.1	0.1	0.1
Screven	235.1	99.6	--	--	--	1.0	1.0	0.4
Tattnall	212.7	96.2	--	5.1	3.3	--	8.4	3.8
Telfair	190.1	100.0	--	--	(1/)	(1/)	(1/)	--
Toombs	143.3	99.5	--	--	0.4	0.3	0.7	0.5
Treutlen	80.9	100.0	--	--	--	--	--	--
Ware	315.0	63.0	--	151.3	31.4	2.1	184.8	37.0
Wayne	359.5	99.6	--	--	--	1.3	1.3	0.4
Wheeler	129.6	99.1	--	--	1.2	(1/)	1.2	0.9
Unit total	7,032.4	92.2	--	539.2	46.6	8.6	594.4	7.8

1/ Less than 50 acres.

2/ Less than 0.05 percent.

Table 24.--Net volume[1/] of saw timber by county and species group, 1952

(In million board feet)

County	Softwoods[2/]	Gum, maple, and yellow-poplar[3/]	Other hardwoods	All species
Appling	365.1	28.2	46.0	439.3
Atkinson	280.2	68.8	--	349.0
Bacon	185.2	36.9	1.9	224.0
Brantley	348.6	98.6	19.9	467.1
Bryan	340.8	141.2	30.8	512.8
Bulloch	294.8	101.9	27.7	424.4
Camden	415.4	57.4	119.6	592.4
Candler	113.5	15.0	7.1	135.6
Charlton	799.3	149.2	20.2	968.7
Chatham	200.5	98.2	37.4	336.1
Clinch	743.6	45.5	--	789.1
Coffee	502.7	81.9	24.9	609.5
Dodge	265.1	25.7	28.0	318.8
Echols	515.8	25.9	2.6	544.3
Effingham	248.4	207.2	70.5	526.1
Emanuel	309.8	117.0	15.1	441.9
Evans	123.2	16.9	4.7	144.8
Glynn	285.3	74.6	50.0	409.9
Jeff Davis	239.3	17.2	41.1	297.6
Jenkins	77.5	57.2	49.9	184.6
Johnson	129.4	75.5	40.0	244.9
Laurens	202.1	139.5	198.7	540.3
Liberty	387.9	105.1	89.1	582.1
Long	254.9	65.4	94.8	415.1
McIntosh	142.4	46.0	27.1	215.5
Montgomery	137.0	26.0	28.2	191.2
Pierce	229.9	50.6	1.5	282.0
Screven	196.0	132.0	82.2	410.2
Tattnall	299.3	74.0	37.6	410.9
Telfair	294.0	54.4	60.9	409.3
Toombs	223.8	68.4	34.8	327.0
Treutlen	189.1	19.4	9.2	217.7
Ware	754.9	65.2	--	820.1
Wayne	511.6	86.9	54.7	653.2
Wheeler	205.5	67.0	56.6	329.1
Unit total	10,811.9	2,539.9	1,412.8	14,764.6

1/ Log scale, International 1/4-inch rule.

2/ Includes pine, cypress, and cedar.

3/ Includes other soft-textured hardwoods.

Table 25.--Net volume[1/] of saw timber by county, broad species group, and diameter-class group, 1952

County	Softwoods		Hardwoods		Softwoods	Hardwoods
	9-14 inches	15+ inches	11-14 inches	15+ inches		
	Million bd. ft.	Million bd. ft.	Million bd. ft.	Million bd. ft.	Percent	Percent
Appling	319.4	45.7	18.1	56.1	83.1	16.9
Atkinson	232.3	47.9	30.9	37.9	80.3	19.7
Bacon	160.9	24.3	24.1	14.7	82.7	17.3
Brantley	274.5	74.1	44.9	73.6	74.6	25.4
Bryan	208.2	132.6	82.9	89.1	66.5	33.5
Bulloch	221.9	72.9	72.8	56.8	69.5	30.5
Camden	304.7	110.7	67.0	110.0	70.1	29.9
Candler	99.1	14.4	16.7	5.4	83.7	16.3
Charlton	511.1	288.2	87.8	81.6	82.5	17.5
Chatham	70.3	130.2	51.2	84.4	59.7	40.3
Clinch	625.7	117.9	21.4	24.1	94.2	5.8
Coffee	399.0	103.7	76.3	30.5	82.5	17.5
Dodge	224.7	40.4	17.4	36.3	83.2	16.8
Echols	469.0	46.8	24.7	3.8	94.8	5.2
Effingham	188.1	60.3	66.9	210.8	47.2	52.8
Emanuel	243.4	66.4	61.2	70.9	70.1	29.9
Evans	99.8	23.4	10.1	11.5	85.1	14.9
Glynn	165.8	119.5	71.3	53.3	69.6	30.4
Jeff Davis	214.3	25.0	18.0	40.3	80.4	19.6
Jenkins	53.0	24.5	38.1	69.0	42.0	58.0
Johnson	91.9	37.5	58.0	57.5	52.8	47.2
Laurens	168.2	33.9	140.1	198.1	37.4	62.6
Liberty	258.2	129.7	78.0	116.2	66.6	33.4
Long	217.6	37.3	64.3	95.9	61.4	38.6
McIntosh	115.1	27.3	32.6	40.5	66.1	33.9
Montgomery	110.8	26.2	19.5	34.7	71.7	28.3
Pierce	207.8	22.1	31.8	20.3	81.5	18.5
Screven	142.3	53.7	63.0	151.2	47.8	52.2
Tattnall	257.4	41.9	47.0	64.6	72.8	27.2
Telfair	236.1	57.9	65.9	49.4	71.8	28.2
Toombs	184.2	39.6	48.4	54.8	68.4	31.6
Treutlen	166.9	22.2	14.9	13.7	86.9	13.1
Ware	600.2	154.7	34.7	30.5	92.0	8.0
Wayne	399.2	112.4	53.1	88.5	78.3	21.7
Wheeler	164.7	40.8	38.0	85.6	62.4	37.6
Unit total	8,405.8	2,406.1	1,691.1	2,261.6	73.2	26.8

1/ Log scale, International 1/4-inch rule.

Table 26.--Net volume[1/] of all timber by county, pulping species group, and tree diameter group, 1952

(In thousand cords)

GROWING STOCK

County	Yellow pines		Other softwoods		Soft-textured hdwds.		Hard-textured hdwds.		All species
	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	5 - 12 inches	13 + inches	
Appling	1,519	269	95	28	98	59	3	106	2,177
Atkinson	865	293	63	11	207	142	4	--	1,585
Bacon	764	132	23	4	135	62	8	5	1,133
Brantley	933	279	143	77	349	202	21	46	2,050
Bryan	821	448	12	--	409	268	66	69	2,093
Bulloch	697	375	41	--	381	174	68	63	1,799
Camden	1,383	481	77	16	413	115	217	248	2,950
Candler	333	126	--	--	152	17	9	13	650
Charlton	1,981	315	304	612	447	289	30	29	4,007
Chatham	239	342	8	11	390	206	86	84	1,366
Clinch	2,589	587	601	71	232	88	--	--	4,168
Coffee	1,535	553	120	34	333	132	19	51	2,777
Dodge	924	260	11	16	121	52	63	66	1,513
Echols	1,703	321	301	32	148	29	3	4	2,541
Effingham	689	227	80	41	192	453	230	141	2,053
Emanuel	1,071	371	--	--	267	234	58	33	2,034
Evans	430	110	46	4	132	27	9	11	769
Glynn	441	351	68	79	244	141	175	107	1,606
Jeff Davis	759	243	20	--	165	29	8	96	1,320
Jenkins	211	79	8	28	78	127	104	110	745
Johnson	287	170	2	--	100	150	40	83	832
Laurens	814	187	7	11	361	279	136	445	2,240
Liberty	949	540	23	39	196	219	215	178	2,359
Long	996	239	87	41	170	130	131	211	2,005
McIntosh	276	119	73	53	261	82	59	44	967
Montgomery	445	157	2	3	160	47	10	59	883
Pierce	918	180	53	12	155	92	4	--	1,414
Screven	467	230	36	24	232	288	152	168	1,597
Tattnall	946	264	14	10	324	150	44	74	1,826
Telfair	1,158	295	7	--	244	99	105	113	2,021
Toombs	683	277	15	--	287	139	12	86	1,499
Treutlen	722	198	--	--	81	38	14	20	1,073
Ware	2,528	534	135	251	195	143	--	--	3,786
Wayne	2,033	459	230	50	257	168	27	120	3,344
Wheeler	628	236	--	4	219	144	117	123	1,471
Unit total	33,737	10,247	2,705	1,562	8,135	5,014	2,247	3,006	66,653

OTHER MATERIAL

Appling	42	42	2	--	95	138	76	41	436
Atkinson	18	17	5	--	121	137	36	9	343
Bacon	36	12	2	3	109	82	43	1	288
Brantley	51	39	14	12	165	128	53	44	506
Bryan	33	79	1	--	145	262	67	91	678
Bulloch	13	17	3	9	154	144	36	110	486
Camden	43	47	68	8	131	130	224	346	997
Candler	20	13	--	--	68	68	29	17	215
Charlton	26	13	60	132	422	212	4	16	885
Chatham	22	19	7	11	100	128	111	209	607
Clinch	62	34	30	12	314	77	13	14	556
Coffee	67	27	3	--	135	113	32	28	405
Dodge	38	21	--	--	124	94	94	108	479
Echols	24	--	67	4	66	60	15	5	241
Effingham	30	2	5	21	51	277	105	151	642
Emanuel	20	5	--	--	138	182	81	37	463
Evans	15	14	5	2	69	32	26	14	177
Glynn	24	33	4	--	70	95	153	357	736
Jeff Davis	56	33	4	--	91	24	93	28	329
Jenkins	3	3	6	11	58	109	30	54	274
Johnson	26	11	--	--	121	139	39	34	370
Laurens	37	72	2	--	256	224	93	202	886
Liberty	29	10	9	36	149	223	58	198	712
Long	30	9	1	--	63	64	54	157	378
McIntosh	8	19	14	25	116	148	90	195	615
Montgomery	30	25	--	--	44	70	38	78	285
Pierce	36	21	6	--	145	102	47	--	357
Screven	29	42	4	54	243	203	177	102	854
Tattnall	58	24	15	--	51	128	122	67	465
Telfair	108	19	--	--	103	95	67	85	477
Toombs	2	--	--	--	192	176	10	51	431
Treutlen	12	12	--	-	36	34	27	18	139
Ware	107	28	16	181	162	90	34	3	621
Wayne	92	5	13	4	77	210	119	65	585
Wheeler	66	43	--	--	83	86	45	43	366
Unit total	1,313	810	366	525	4,467	4,484	2,341	2,978	17,284

1/ Sound wood and bark.

DEFINITION OF TERMS

Land-Use Classes

Forest land: Includes (a) lands which are at least 10 percent stocked with trees of any size and capable of producing saw timber or other wood products, and (b) lands from which the trees described in (a) have been removed to less than 10-percent stocking but which have not been developed for other use; subdivided into the following classes:

Commercial: Forest land which is (a) producing, or physically capable of producing, usable crops of wood (usually saw timber), (b) economically available now or in the future, and (c) not withdrawn from timber use.

Noncommercial: Forest land (a) withdrawn from timber utilization through statute, ordinance, or administrative order but which otherwise qualifies as commercial forest land, and (b) incapable of yielding usable wood products (usually saw timber) because of adverse site conditions, or so physically inaccessible as to be unavailable economically in the foreseeable future.

Nonforest land: Includes land in any of the following classes:

Active agriculture: Land under cultivation or in pasture including farm yards and work lots.

Pasture: Land under fence used primarily for grazing purposes where the timber has been cleared to less than 10-percent stocking and a real attempt to produce a sod has been made.

Idle agriculture: Land previously cultivated or pastured but now idle or abandoned and having less than a 10-percent stocking of forest trees.

Marsh: Low, wet areas characterized by a heavy growth of grass and reeds and an absence of timber.

Urban and other areas: Includes towns, residential and industrial suburban areas, school yards, cemeteries, roads, railroads, power lines, and other rights-of-way.

Water: Includes lakes, bays, and estuaries over 40 acres in size, and streams, canals, and sloughs at least one-eighth of a mile in width which are classed as "inland water" by the Bureau of the Census. Smaller lakes and ponds between one acre and 40 acres in size, and waterways between 120 feet and 660 feet in width, which are classed as land area by the Bureau of the Census, are also included as water areas.

Forest Types

Forest type is determined on the basis of cubic volume for all stand sizes except seedlings and saplings (stand size 4), in which case the number of stems are the criteria.

Pine types: Forests in which 50 percent or more of the stand is in pine species. Plurality of volume or number of trees is used to determine the specific type.

Oak-pine type: Forests in which 50 percent or more of the stand is hardwood, usually upland oaks, but in which southern yellow pines make up 25-49 percent of the stand.

Oak-hickory type:

Upland hardwood: Forests in which 50 percent or more of the stand is composed of upland oak, hickory, yellow-poplar, maple, gum, and other hardwoods, except where pines comprise 25-49 percent of the stand.

Scrub oak: Upland forests in which 50 percent or more of the stand is composed of scrub oak species, except where pines comprise 25-49 percent of the stand.

Oak-gum-cypress type:

Lowland hardwood: Bottomland forests in which 50 percent or more of the stand is tupelo,black gum, sweetgum, ash, oak, elm, maple, and associated species, except where pines comprise 25-49 percent of the stand.

Cypress: Bottomland forests in which 50 percent or more of the stand is cypress, except where pines comprise 25-49 percent of the stand.

Stand-Size Classes

Saw timber: Stands containing at least 1,500 board feet net volume per acre, 1/4-inch log rule, in sound, live, softwood trees 9.0 inches d.b.h. or larger, or hardwood trees 11.0 inches d.b.h. or larger. Two classes of saw-timber stands are recognized:

Large saw timber: Stands of saw timber having more than 50 percent of the net board-foot volume in trees 15.0 inches d.b.h. or larger.

Small saw timber: Stands of saw timber having 50 percent or less of the net board-foot volume in trees 15.0 inches d.b.h. or larger.

Pole timber: Stands failing to meet the minimum saw-timber specifications, but at least 10-percent stocked with trees 5.0 inches d.b.h. or larger and with at least half the minimum stocking in pole-size trees.

Seedling and saplings: Stands not qualifying as saw-timber or pole-timber stands, but having at least a 10-percent stocking of trees of commercial species and with half the minimum stocking in seedlings and saplings.

Nonstocked and other areas: Forest areas not qualifying as saw-timber, pole-timber, or seedling and sapling stands.

Diameters

D.b.h. (diameter at breast height): Stem diameter in inches, outside bark, measured at 4-1/2 feet above the ground.

Diameter class: All trees were tallied by 2-inch diameter classes, each class including diameters 1.0 inch below and 0.9 inch above the stated mid-point, e.g., trees 7.0 to and including 8.9 inches are included in the 8-inch class. Corresponding limits apply to other diameter classes.

Timber Quality Classification

Growing Stock:

Saw-timber trees: Live softwood trees at least 9.0 inches d.b.h. and hardwood trees at least 11.0 inches d.b.h., with not less than one merchantable log 12 feet long, or with less than 50 percent of the gross volume of the tree in sound saw timber.

Pole-timber trees: Straight-boled trees between 5.0 inches d.b.h. and saw-timber size.

Sapling-size trees: Trees 1.0 inch to 4.9 inches d.b.h. which will grow into pole- or saw-timber size trees of sound quality.

Other Material:

Sound cull trees: Live trees of all sizes that are unmerchantable for sawlogs now or prospectively because of species, poor form, excessive limbiness, or other sound defect.

Rotten cull trees: Live trees of all sizes that are unmerchantable for sawlogs now or prospectively because of rotten defect.

Hardwood limbs: The limb volume of all hardwood saw-timber and cull trees to a minimum diameter of 4.0 inches inside bark.

Species Groups

Yellow pines: Includes longleaf, slash, loblolly, pond, and shortleaf pine.

Other softwoods: Pond cypress, baldcypress, eastern redcedar, and Atlantic white cedar.

Soft-textured hardwoods: Black and tupelo gum, yellow-poplar, sweetgum, cottonwood, soft maple, basswood, magnolia, sweetbay, and willow.

Hard-textured hardwoods: All of the oaks, hickories, ash, beech, elm, river birch, hackberry, sycamore, black locust, mulberry, black walnut, holly, dogwood, and persimmon.

Volume Estimates

Board-foot volume: The volume in board feet, measured by the International 1/4-inch rule, exclusive of defect, of that portion of sound sawtimber trees between the stump and the upper limit of merchantability for sawlogs.

Volume in cords: For sound trees the volume in standard cords (including bark) of the sound portion of trees 5.0 inches d.b.h. and larger, between stump and a minimum top-stem diameter of 4.0 inches inside bark. Similar volumes are given for cull trees. The volume in limbs, in sections four feet long and at least 4.0 inches in diameter inside bark, of all sawtimber size hardwoods is shown separately.

Volume in cubic feet: Same as volume shown in cords except bark is not included.

International 1/4-inch log rule: A rule for estimating the board-foot volume of 4-foot log sections, according to the formula $V = .905\ (0.22D^2 - 0.71D)$. The taper allowance for computing the volume in log lengths greater than four feet is 0.5 inch per 4-foot section. Allowance for saw kerf is 1/4 inch.

Standard cord: A stacked pile, 4 x 4 x 8 feet, of round or split bolts, estimated to contain, on the average, about 73 cubic feet of solid wood.

Gum Naval Stores Conditions

Round timber A minimum of 15 longleaf and slash pine trees 9.0 inches d.b.h. or larger per a re hat have not been worked for naval stores.

Working. Longleaf and slash pine trees that are now being worked for naval stores.

> Front-faced: Turpen ine tree species on which th front or first face is now being worked.
>
> Back-faced: Turpentine tre pe ies on which the front face has been worked ut and n which a back (second or third, etc.) face is being worked.

Resting. Longleaf and slash pine trees with a worked-out or abandoned front face and on which back-facing has not been started.

Worked-out. Longleaf and slash pine trees on which two or more faces have been worked out and with no possibility of supporting another face.

Stocking

Stocking is the extent to which growing space is effectively utilized by tree . The number of stems present by d.b.h. classes was used as a basis for stocking classification. Areas having the minimum numbers of trees listed below, either in a single diameter class or proportionately in any combinations of diameter classes, were considered fully stocked.

D.b.h.	Minimum number trees per acre
Seedlings	1,000
2 inches	800
4 inches	590
6 inches	400
8 inches	240
10 in hes	155
12 inches	115
14 inches	90

RELIABILITY OF FOREST SURVEY DATA

In general, the errors which affect the accuracy of Forest Survey area and timber volume estimates arise from two sources. These may be described as (1) sampling errors which result from using sampling procedures rather than making a complete inventory or canvass, and (2) non-sampling errors which arise from human mistakes in judgment, measurement, recording, or arithmetic.

In Forest Survey work a diligent effort is made to maintain a high degree of accuracy in the collection and compilation of data. The sampling errors are held to a specified minimum through survey design and sampling technique. These errors are the only measurable errors involved in computing the reliability of the data. The non-sampling errors are minimized or eliminated through training, supervision, field check cruises, and complete editing and machine verification in compiling the data.

Forest area.--The sampling intensity of the 1952 survey was sufficient to provide an estimate of the total forest acreage in the Unit with a standard error of ±0.6 percent. The probabilities are two out of three that the estimated forest acreage is within ±0.6 percent of the actual acreage.

Cubic volume.--The standard error of the 1952 net cubic-foot volume in the Unit was ±2.3 percent. Here again, the probabilities are two out of three that the estimated volume does not vary from the actual volume by more than this percentage. The standard error of the volume in cords was not computed but it should be approximately the same.

Board-foot volume.--The standard error of the 1952 estimate of board-foot volume in the Unit was ±2.5 percent.

Use of county data.--The tables showing area and timber volumes by county are included to permit grouping of the data in any desired combinations. The survey was designed so that the number of sample plots taken in each county would provide an estimate of the timber volume in cubic feet which would not exceed ±15 percent. The actual range of error of the cubic volume estimates by county is from ±9.2 percent to ±15.7 percent. The errors of board-foot volume estimates by county range from ±9.5 percent to ±16.2 percent, and of forest area from ±0.9 percent to ±7.9 percent.

In spite of the accuracy limit set on volume estimates by county, comparison of individual county statistics may be subject to considerable error and should be avoided. Grouping the data for a number of counties will increase the reliability and make the combined estimates sufficiently accurate for general use. For example, grouping the timber volume data for three counties with errors ranging from 9 to 16 percent resulted in a total volume estimate with only 7 percent error.

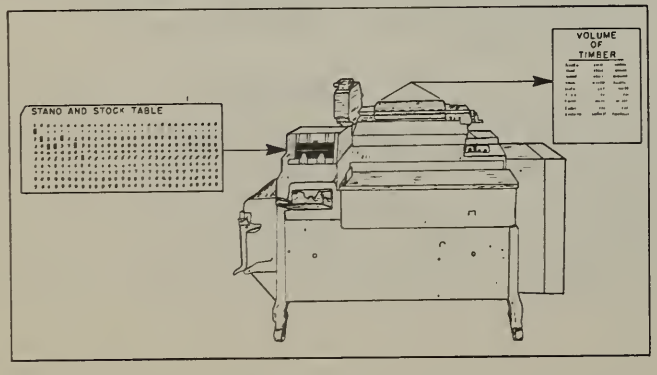
HOW THE FOREST INVENTORY IS MADE

The present system of inventory is a two-step method which includes land-use classification of points on aerial photographs followed by the cruising of ground sample plots. The county is the basic work unit. The detailed procedure is as follows:

1. Preliminary estimates of the acreage of land in forests and other land-use classes are obtained by classifying points printed on every third aerial photograph in alternate flight lines within a county. The proportion of points falling in each class is used to estimate the acreage. This estimate is later checked and revised through the use of ground plots.

2. Ground sample plots are selected in a systematic manner from the forest land classifications made in Step 1, using an interval which will provide sufficient plots to meet established limits of error per billion cubic feet of timber. This results in a proportional sample of all existing timber stands. Timber cruisers make a detailed description and tally of the ground plots to obtain data on timber volume, quality, stocking, and mortality. Samples of agricultural and other photo classifications are also checked on the ground to verify or adjust the area estimates based on these classifications.

3. Growth estimates are based on increment borings taken proportionally from sample trees of various diameters and species in each forest type and stand class. The volume of timber drain is computed from a tally of the stumps of trees cut on the plots during a specified period.



4. All field data are sent to Asheville for editing and are placed on punch cards for machine sorting and tabulation. Final estimates are based on statistical summaries of the data.

FOREST SURVEY REPORTS PUBLISHED SINCE 1945

Southeastern Forest Experiment Station

No. 21 - 1945 Pulpwood Production by County in the Carolinas and Virginia.

No. 22 - Southern Forests as a Source of Pulpwood.

No. 23 - 1946 Pulpwood Production by County in the Southeast.

No. 24 - Southern Pulpwood Production and the Timber Supply.

No. 25 - Forest Resources of the Lower Coastal Plain of South Carolina.

No. 26 - 1946 Commodity Drain by County from South Carolina Forests.

No. 27 - 1947 Pulpwood Production by County in the Southeast.

No. 28 - South Carolina's Forest Resources, 1947.

No. 29 - 1948 Pulpwood Production by County in the Southeast.

No. 30 - Forest Resources of Northeast Florida, 1949.

No. 31 - Forest Resources of Central Florida, 1949.

No. 32 - Forest Resources of Northwest Florida, 1949.

No. 33 - Forest Resources of South Florida, 1949.

No. 34 - Timber Production and Commodity Drain from Florida's Forests, 1948.

No. 36 - Forest Statistics for Florida, 1949.

No. 37 - Forest Statistics for Southwest Georgia, 1951.

No. 38 - 1951 Pulpwood Production in the South.

OTHER BULLETINS

Pulpwood Production in the South, 1950. Forest Survey Release No. 69.

Virginia Forest Resources and Industries, 1949. U. S. Dept. Agr. Misc. Pub. No. 681.

The Timber Supply Outlook in South Carolina, 1951. U. S. Dept. Agr. Resource Report No. 3.

Agriculture--Asheville